

# Training The Driver

WILLIAM ASHER, Ph.D.

Professor of Education and Psychology  
Purdue University, Lafayette

## INTRODUCTION

Things change with time, and it is men like you who attend Road School who make them change for the better. The streets and highways of Indiana have improved prodigiously in the 50 years that this group has been meeting. In fact, from a traffic safety point of view, you have been preeminently successful.

Along with the engineers who recently have been redesigning automobiles to improve their safety characteristics (with a little push from Ralph Nader), you would have to be considered one of the most successful professional groups of modern times. We will soon be able to drive to almost any point in the state at speeds approaching a mile-a-minute; the safety hazards from modern road design and the vehicle being minimal.

One need only recall the old National Road, old U. S. 40, circa 1950, the cars of that era compared to the modern interstate highways and modern automobile designs to realize how great the contributions have already been of the engineers and traffic experts to traffic safety. There undoubtedly are many contributions left to be made, and certainly implemented in these areas, but perhaps the further reduction of accidents from the engineering and physical sciences sources is nearing an asymptote.

## DRIVER ERROR CAUSE OF MOST ACCIDENTS

It is difficult to get precise figures, but the Arthur D. Little report, *The State of the Art of Traffic Safety*, can be quoted.

"In the absence of a very striking defect or failure in the roadway, the vehicle, or the driver's own medical condition, the 'cause' of an accident is almost invariably assigned to one or another of a variety of driver errors. Thus, driver error is typically stated to be responsible for from 80 to 90 percent of all accidents" (p. 37).

Even where the road or the car might be at fault, the accident often could have been humanly preventable or reduced in severity with a skillful driver. Another expert opinion on the estimate of vehicle defect

accidents is that of Professor Buher, of the Traffic Institute of Northwestern University, given in the Little report. “. . . it was impossible to identify the share of accidents that are directly attributable to mechanical defects but that he believed it to be probably under five percent of all accidents and perhaps as little as two percent of all accidents.” (p. 280).

*80 Percent of Fatalities Maladjusted, Alcoholics or Under Stress*

Further evidence is the study “Drivers Who Die” done by the Baylor University, College of Medicine. (Highway Safety Literature, HSL #69-10, March 14, 1969, page iii). In order to determine personality characteristics of these drivers, family members were interviewed by a psychiatrist, then these drivers were compared with a control of 25 matched drivers randomly selected from the Houston area. This group was subjected to the same psychiatric scrutiny as the dead drivers. “The results indicated that 80 percent of the fatalities were maladjusted in that they were either alcoholics or had personality disorders or both. Only 12 percent of the control group were so classified.” (Highway Safety Literature, March 14, 1969, p. iii). Psychiatric stress (marital, financial, occupational, etc.), was prevalent in 80 percent of the fatality group within 24 hours prior to the crash. The Baylor researchers conclude, “In general, it appears that the driver’s personality pattern, a stressful event, and the resulting intrapsychic reaction coalesce to form a condition of impaired driving ability. If alcohol is added, this situation is further compromised leading to the high probability of appearance of an accident.” (iv.)

*Most Youth Severe Accidents on Straight-Aways*

I have just completed, under the sponsorship of the Joint Highway Research Project, an analysis of teen-agers and young adults involved in severe accidents in Indiana. Again, the results tend to confirm that it is *not* the road or the car that is the major problem in traffic accidents. The major occurrence of these accidents was on a straight, level, blacktop, dry road in clear weather, generally in open country or a residential area in the driver’s home county. The car had no defects, there was no obscured vision, and the driver was physically normal. Boys outnumber girl drivers three to one and the worst times are late Saturday night, with Friday and Sunday a close second. Very few of these accidents were at culverts, railroad crossings, or bridges. Less than one percent had bad brakes or lights. About one percent disregarded a traffic signal or failed to stop at a stop sign, but seven percent had been drinking. Fourteen percent were skidding before or after

applying their brakes. Seven percent were passing, and nine percent were turning, but as I've indicated 64 percent were simply driving straight ahead.

I believe these figures simply tend to confirm what I've already said. Given the current state of highways and cars as the result of successful engineering and traffic management, it is the drivers who are the prime cause of accidents today.

Further, as we examine the aspects of the drivers which appear to be the source of the most of the accidents, they are distinctly *not* in the cognitive or perceptual response realms. The years of study on the legibility of traffic signs and other aspects of man-machine systems already implemented, have reduced the further contributions to traffic safety that can be made in this area.

## REDUCING ACCIDENTS THROUGH DRIVERS' EMOTIONAL AND SOCIAL-PSYCHOLOGICAL REALMS

Perhaps the disaster of automobile accidents can be reduced by going to the heart of the remaining problem—the drivers' emotional and social-psychological realms.

### *16 to 26 Most Hazardous Age*

During what years is the problem of high accident rate drivers most prevalent? Anyone vaguely familiar with the problem, or even insurance rates, knows that the ages between 16 and 26 are the most hazardous. Further injury and deaths are a far greater economic loss at this age because the economic support years have not yet been recovered, and the future economic contributions are so great.

With the evidence that the social and affective aspects of the driver are the most important modern contributor to automobile accidents, in what areas might the majority of automobile accident reduction efforts be directed? Second, if the greatest incidence is among high school and post high school ages, when might training be most effective and through what media or institutions? I think the answers are rather obvious and that they reinforce one another. A high payoff for training drivers in their late teens and young adults on the social and emotional aspects of driving seems rather predictable.

## TRAINING THE DRIVER ON SOCIAL AND EMOTIONAL ASPECTS

Thus, after looking at the evidence in light of our current knowledge and practices in traffic safety, I return to the theme, "Training the

Driver," and suggest that maybe this is where the emphasis of traffic safety and improvement will have to be for the next generation. (I might suggest that you have been so successful that you might come close to putting yourselves out of business, if I didn't know the continuing excellent work that you're doing in maintenance and development.)

### *The Ineffectiveness of Present Driver Training*

This emphasis on driver training may seem somewhat strange coming from a researcher who has just concluded one of the most massive studies of the ineffectiveness of driver education in the U.S. But to paraphrase an old saying, if driver education did not exist, I would have to invent it. But I would probably change its name to something like "Automobile Accident Prevention" rather than driver education. If one reviews the curriculum of driver education, you do find content directed at accident prevention, but it is only one aspect of the course which includes a great many other topics. I really don't think that the majority of today's youth needs a great deal of instruction in the psychomotor functions involved in driving with the simplified controls of modern cars. In fact, I wonder how many students taking driver education already know how to drive? As I have indicated, I am convinced that current driver education programs have little effectiveness, if any, in preventing accidents. In fact, they may contribute to them by allowing some students to drive earlier.

### *Developing an Effective Curriculum for Driver Education*

While the course may have other values, I think it imperative that a curriculum be developed for driver education courses which can be shown empirically to be effective in reducing accidents, and I have given some thought to the considerations upon which such a curriculum would be based.

### *High School Driver Training—Social-Psychological and Attitudinal*

First, I would certainly retain the space in the high school curriculum for a course which driver education now occupies. With the preponderance of accidents in the 16 through 25 age group, the high school years are an ideal time to give the course. Second, with the greatest percentage of accidents related to drivers' emotional problems, I would concentrate on the social-psychological conditions of drivers when they have accidents. Third, I would concentrate on the students' attitudinal re-education. Most students already have well developed feelings about cars and driving. It is toward changing these attitudes and feelings;

not toward facts and cognitive processes, that we need to concentrate in this curriculum.

#### *Concentrate on Boys and Potential Dropouts*

Next, I would concentrate heavily on the boys. It is well known that male drivers are associated with a majority of accidents in this age group. Further, it is imperative that we get to the dropouts before they get to us. We know that lower socio-economic students drop out more frequently and that the lower SES groups have more accidents. I do not recommend the standard driver education texts or any form of reading, lecture, preaching, or recitation as the educational method. These educational methods have only minimal effect on students' attitudes. (As they say, you can always tell a teen-ager, but you can't tell him much.) I would suggest, perhaps, discovery learning problems for the students on causes of auto accidents. Let them determine the causes and suggest solutions for remission of the problem. Role playing, small group discussions, and group dynamics techniques of the Bethel and sensitivity group variety might be helpful.

#### *Teach Recognition of Emotional Symptoms*

The problem of strong hostile, aggressive, and suicidal emotions in severe accidents may be so great that an emphasis on concern for others; drivers, passengers, and pedestrians may have to be built into the new curriculum. Certainly, drivers need to learn to recognize the symptoms of severe emotional involvement and recognize the driving hazard to themselves and others as a result.

#### *Teach Effects of Alcohol*

One of the major areas of concentration in the new curriculum will have to be the role of alcohol in automobile accident deaths, acceptable tolerances, and the difference between social drinking and drinking as a symptom of pathology. Let the students calculate how much they can drink of various beverages for their body weight, its effects on their driving, and the legal limits in their state.

#### *Teach Proper Reactions Where Instinctive Reactions Wrong*

Finally, I would recommend, as is done to some extent now, extensive, hands-on experiences with skid control, blowouts, night driving, and bad weather driving until correct reactions are automatic. One's instinctual reactions in these situations are often wrong, and many drivers don't know what to do even at a cognitive level.

## SUMMARY

In summary, I might say that you, and groups such as yours throughout the United States, have been quite successful in planning and building efficient and safe roads. It is now up to psychologists, other behavioral scientists, and educators to discover much more about the emotional and social causes of traffic accidents, to develop means of alleviating these causes, and to implement them. You, as successful and respected authorities in the areas of highway and traffic specialties, can aid us by recognizing the current causes of traffic accidents, giving us support—both vocally and financially and help implement effective training programs as they are developed.